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d his

     (FILE 'HOME' ENTERED AT 07:26:12 ON 18 AUG 2003)

     FILE 'REGISTRY' ENTERED AT 07:26:20 ON 18 AUG 2003
                E DIMETHYL AMIDE
L1          2620 S E329-E377

     FILE 'CAPLUS, INSPEC' ENTERED AT 07:39:55 ON 18 AUG 2003
L2          3397 S L1 AND (GALLIUM OR ALUMINUM OR ALUMINIUM OR INDIUM)
L3          4929 S L2 AND (SPIN COATING) OR (SPIN COATED) OR (SPIN COAT)
L4          2463 S L3 AND (SUBSTRATE OR WAFER)
L5           101 S L4 AND AMORPHOUS
L6            25 S L5 AND (CRYSTALLIZE OR CRYSTALLIZATION OR EPITAXY OR EPITACT
L7             0 S L6 AND NITRIDE
                E GALLIUM NITRATE
L8           580 S E3

     FILE 'REGISTRY' ENTERED AT 07:53:07 ON 18 AUG 2003
                E GALLIUM NITRADE
                E GALLIUM NITRATE
L9             6 S E3

     FILE 'CAPLUS, INSPEC' ENTERED AT 07:54:00 ON 18 AUG 2003
L10         4918 S L9 AND (SPIN COATING) OR (SPIN COATED) OR (SPIN COAT)
L11          475 S L10 AND (GALLIUM OR ALUMINUM OR ALUMINIUM OR INDIUM)
L12           23 S L11 AND AMORPHOUS
L13          181 S L2 AND (CRYSTALLIZE OR CRYSTALLIZATION OR EPITAXY OR EPITAXIA
L14            9 S LL2 AND (CRYSTALLIZE OR CRYSTALLIZATION OR EPITAXY OR EPITAXI
L15            2 S L12 AND (CRYSTALLIZE OR CRYSTALLIZATION OR EPITAXY OR EPITAXI

     FILE 'REGISTRY' ENTERED AT 08:01:39 ON 18 AUG 2003
                E ALKOXIDE
                E GALLIUM ALKOXIDE
L16            0 S E3
                E ALKOXIDE
L17           66 S E2-E10

     FILE 'CAPLUS, INSPEC' ENTERED AT 08:04:47 ON 18 AUG 2003
L18          232 S L17 AND ((SPIN COATING) OR (SPIN COATED) OR (SPIN COAT))
L19           21 S L18 AND (GALLIUM OR ALUMINUM OR ALUMINIUM OR INDIUM)
L20            2 S L19 AND (CRYSTALLIZE OR CRYSTALLIZATION OR EPITAXY OR EPITAXI

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ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN

AB The authors studied effects of final heat-treatment conditions on microstructures of YbBa2Cu3O7-.delta. films formed on LaAlO3(001) substrates by the dipping-pyrolysis process. First, the authors prepd. **amorphous** precursor films by heating the **spin-coated** substrates at 425.degree. in air. Subsequently, YbBa2Cu3O7-.delta. films were prepd. by heat-treating these precursor films at 750.degree. in an Ar gas flow under various conditions of heating rate and holding time. Microstructures of the final films were studied by TEM. In conclusion, rapid heating rate at the final heat-treatment is necessary for the epitaxial growth of the superconducting films, and long holding time is effective for the grain growth of the crystals.

ACCESSION NUMBER: 2000:680942 CAPLUS
DOCUMENT NUMBER: 134:12053
TITLE: Effects of the final heat-treatment conditions on microstructures of YbBa2Cu3O7-.delta. superconducting final films deposited on LaAlO3(001) substrates by the dipping-pyrolysis process
AUTHOR(S): Shibata, Junko; Yamagiwa, Katsuya; Hirabayashi, Izumi; Hirayama, Tsukasa; Ikuhara, Yuichi
CORPORATE SOURCE: Japan Fine Ceramics Center, Nagoya, 456-8587, Japan
SOURCE: Advances in Superconductivity XII, Proceedings of the International Symposium on Superconductivity (ISS'99), 12th, Morioka, Japan, Oct. 17-19, 1999 (2000), Meeting Date 1999, 589-591. Editor(s): Yamashita, Tsutomu; Tanabe, Kei-ichi. Springer-Verlag Tokyo: Tokyo, Japan.
CODEN: 69AJQC
DOCUMENT TYPE: Conference
LANGUAGE: English
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN

AB The thermal decompn. and **crystn**. processes of two types of films with various thicknesses prepd. by spin-coating aq. and acetylacetone solns. made by dissolving metal nitrate hydrates of appropriate ratios for the garnets, are described. The aq. films decompd. with endothermic reactions over a broad temp. range from 80-500.degree., while the acetylacetone films decompd. at two strong exothermic reactions at temps. of 130.degree. and 260.degree.-400.degree.. Both films decompd. to become **amorphous** oxides, which then began to **crystallize** at a temp. of .apprx.600.degree.. Also when the **amorphous** oxide films were thinner than 0.3 .mu.m, the garnets were formed directly from the **amorphous** oxides. When the films were thicker than 0.3 .mu.m, intermediate orthoferrites were formed which, upon further heating, transformed to the garnets. DTA, TG, and x-ray diffraction data in the temp. range 20-750.degree. are given and discussed.

ACCESSION NUMBER: 1994:620256 CAPLUS
DOCUMENT NUMBER: 121:220256
TITLE: Thermal and x-ray studies of the pyrolysis process for bismuth-substituted iron garnet films
AUTHOR(S): Cho, J.
CORPORATE SOURCE: Data Storage Systems Center, Carnegie Mellon Univ., Pittsburg, PA, 15213, USA
SOURCE: Journal of Materials Science (1994), 29(15), 3993-6
CODEN: JMTSAS; ISSN: 0022-2461
DOCUMENT TYPE: Journal
LANGUAGE: English

20 ANSWER 1 OF 2 INSPEC (C) 2003 IEE on STN
AN 2003:7539669 INSPEC DN A2003-07-7755-005; B2003-04-2810F-011
AB Ferroelectric lead zirconate titanate (PZT) thin films containing crystalline seeds of barium strontium titanate (BST) nanoparticles were prepared by the complex **alkoxide** precursor method on **indium** titanium oxide (ITO) glass electrodes. The PZT films approximately 500 nm thick at BST particle concentrations of 0-34.2 mol% were fabricated with a **spin-coating** method and annealed at various temperatures. A non-seeded PZT film was crystallized into a perovskite structure by annealing at 500 degrees C. The seeding with the BST particles promoted crystalline growth of PZT perovskite around the seeds, and lowered the **crystallization** temperature of the PZT films to 420 degrees C.

DOCUMENT NUMBER: A2003-07-7755-005; B2003-04-2810F-011
TITLE: Low-temperature synthesis of single-phase lead zirconate titanate thin film with a nm-seeding technique.
AUTHOR: Tanase, T.; Nishikata, A.; Iizuka, Y.; Kobayashi, Y.; Konno, M. (Graduate Sch. of Eng., Tohoku Univ., Sendai, Japan); Miwa, T.
SOURCE: Journal of the Ceramic Society of Japan (Oct. 2002) vol.110, no.10, p.911-15. 49 refs.
Published by: Ceramic Soc. Japan
CODEN: NSKRE2 ISSN: 0914-5400
SICI: 0914-5400(200210)110:10L.911:TSSP;1-R
DOCUMENT TYPE: Journal
TREATMENT CODE: Experimental
COUNTRY: Japan
LANGUAGE: English

L20 ANSWER 2 OF 2 INSPEC (C) 2003 IEE on STN
AN 2002:7381452 INSPEC DN A2002-21-8115L-007
AB Antiferroelectric lead zirconate titanate PZT (95/5) has been prepared by chemical solution deposition using **alkoxide** precursor compounds and was **spin-coated** on metallic substrates of Hastelloy. In order to better adapt the substrate to the PZT and thus to improve the **crystallization** behavior of the PZT films, different interface layers have been studied. The annealing parameters have been optimized in the case of an intermediate RuO2 layer. Other interface layers like **indium** tin oxide (ITO) or lanthanum, strontium manganate (LSMO) can be compared to deposition of the PZT on Hastelloy and on platinum coated Hastelloy. Using conventional multi-coating technique, homogeneous antiferroelectric films of up to 2.5 mu m thickness have been obtained.

DOCUMENT NUMBER: A2002-21-8115L-007
TITLE: Preparation and characterization of antiferroelectric PZT thin films on steel substrates using intermediate oxide layers.
AUTHOR: Seveno, R.; Averty, D.; Gundel, H.W. (Lab. de Phys. des Isolants et d'Optronique, Nantes Univ., France)
SOURCE: Ferroelectrics (2002) vol.271, p.241-6. 9 refs.
Published by: Gordon & Breach
CODEN: FEROA8 ISSN: 0015-0193
SICI: 0015-0193(2002)271L.241:PCAT;1-R
Conference: Tenth International Meeting on Ferroelectricity (IMF-10). Madrid, Spain, 3-7 Sept 2001
DOCUMENT TYPE: Conference Article; Journal
TREATMENT CODE: Experimental
COUNTRY: Switzerland
LANGUAGE: English